



Title: **Emergency Procedures for Ethylene Oxide Release**

Number EH&S -2-7

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PURPOSE: To provide an emergency plan for an ethylene oxide (EtO) release in Central Sterile Supply (CSS).

SCOPE: Hospital wide.

DEFINITIONS:

Ethylene Oxide (EtO): A gas used in Central Sterile Supply for sterilizing medical equipment, stored in small cartridges.

PROCEDURES:

I. CSS Administration Preplanning

1. Designate On-site EtO Emergency Aides

- a. CSS administrators must designate an EtO Emergency Aide for each shift and the Aides are responsible for coordination with outside departments and agencies during an emergency situation.

2. Maintain an Emergency Contact List

- a. CSS administrators must maintain a list of emergency contact numbers including University Police, Environmental Health and Safety (EH&S), CSS administrators, manufacturers, and maintenance contractors.

3. Maintain a Written Emergency Action Plan that includes:

- a. List of designated EtO Emergency Aides,
- b. Emergency Contact List,
- c. Emergency escape procedures,
- d. Procedures to account for all employees after emergency evacuation has been complete,
- e. Means of reporting emergencies (discussed below), and
- f. Name or regular job title of persons or departments who can be contacted for further information or explanation of duties under plan.

4. Conduct Emergency Preparedness Training

- a. CSS Administrators shall provide training to their staff on this procedure, their emergency plan and other pertinent information.

II. Emergency Procedures for EtO Release

1. Evacuation and Emergency Notifications

- a. The EtO Emergency Aide or Aide's representative shall evacuate the immediate area, and coordinate the transport of any persons exposed to EtO to Employee Health Services or Emergency Department (off hours).
- b. If possible, the EtO Emergency Aide or Aide's representative shall remove any ignition sources since EtO can be ignited by an open flame or spark. The EtO Emergency Aide or Aide's representative shall contain the area by closing doors or other means to prevent escape of EtO vapor.
- c. The EtO Emergency Aide or Aide's representative must contact the University Police at 911 from a hospital phone (or 631-632-3333 from cell phone) and advise them that there has been an ethylene oxide leak and to have EH&S' Hazardous Materials Team respond. Also, they must inform the University Police whether there are any injured persons and if any other pertinent actions were taken.
- d. The EtO Emergency Aide or Aide's representative must contact the outside vendor(s) who are responsible for the maintenance of the EtO sterilizers, aerators and abater, and notify them of the emergency situation and ask them to immediately send a representative to the site. The EtO Emergency Aide must wait outside the affected area in the vicinity of the main elevators to provide information to emergency responders and the maintenance vendor's representative.
- e. Do not re-enter the area until a representative from EH&S has determined the area safe for re-entry.

2. Emergency Response and Remediation

- a. EH&S, along with the Setauket Fire Department (if appropriate), is responsible for bringing the emergency under control. This includes rescue, firefighting and contamination control through clean up or other methods.
- b. EH&S will coordinate remediation with the maintenance contractor representative or Physical Plant personnel, if required.
- c. Based on airborne EtO concentrations, EH&S Fire Marshals shall wear appropriate personal protective equipment.
- d. A representative from EH&S shall authorize re-entry into the spill area.

3. Medical Surveillance and First Aid

- a. Any person exposed to EtO without proper personal protective equipment should seek medical attention. Injured employees should immediately report to Employee Health Services or the Emergency Department (off hours).
- b. Clothing wet with liquid EtO may be easily ignited. Contaminated clothing must be immediately removed while under an emergency shower or other water source.
- c. If skin comes in contact with liquid EtO, immediately flush affected area with water.

4. Follow-up

- a. EH&S shall complete an Incident Report form and forward a copy to CSS administrators and other appropriate departments for any necessary follow-up.

INQUIRIES/REQUESTS:

Environmental Health and Safety
L1-059 HSC
Zip 8017
Main Office: 444-6783
FAX: 444-6845

RELATED FORMS:**RELATED DOCUMENTS:**

29 CFR 1910.1047 *Ethylene Oxide*
29 CFR 1910.134 *Respiratory Protection*
29 CFR 1910.38 *Employee Emergency Plans and Fire Prevention Plans*
ANSI/AAMI ST41:1999 *Ethylene Oxide Sterilization in Health Care Facilities: Safety and Effectiveness*